

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Attorney Docket No.: 2733.35WOUS

Chow, et al. Confirmation No.: 4192

Application No.: 10/552,097 Examiner: Joshua J. Michener

Filed: February 21, 2006 Group Art Unit: 3644

For: LANDING GEAR ASSEMBLY

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants request review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reasons stated on the attached sheets.

Remarks

1. The Office Action misinterprets the claims language “Wheel/tire Assembly”

The Office Action bases the rejection, in part, on the interpretation of the term “wheel/tire assembly” as referring to a wheel and a tire assembly thus interpreting the tire alone as an assembly. The term “wheel/tire assembly” refers to an assembly with both a wheel and a tire. It does not mean a wheel and a separate tire assembly. One of ordinary skill in the art is well aware that a tire is a unitary structure that is complete in itself. It is well known to even to a layman that an *assembly* must be *assembled* from several parts. Accordingly, an assembly can be disassembled. A tire cannot be disassembled. Therefore, a tire alone cannot be an assembly.

Further, each independent claim explicitly defines the “wheel/tire assembly” as “including a wheel having a rim around which there is mounted a tire.” Accordingly one of ordinary skill in the art would not interpret the claim term “wheel/tire assembly” as the Office Action has suggested but would instead understand that the “wheel/tire assembly” is the assembly made up of the wheel with the tire mounted to it as a wheel and tire are normally assembled when in use. Accordingly, this interpretation is improper and should be withdrawn.

2. When “Wheel/tire Assembly” is properly interpreted Roth does not disclose or suggest “a surface of the wheel/tire assembly presented to the airflow-across the part bounded by the widest part of the tire is substantially flat.”

Based on above interpretation, it is clear that these limitations of claim 15 describe the widest part of the whole wheel/tire assembly and not just the widest part of either the wheel or the tire. In Roth, this widest part is the widest point of the tire since the wheel is narrower (located at approximately reference numeral 37 in Figure 2). Hence, “the surface of the wheel/tire assembly presented to the airflow-across the part bounded by the widest part of the

tire” is bounded by the circle created by rotation of this point around the wheel/tire assembly and hence, the part that must be “substantially flat” in shape is bounded by the circle with the circumference corresponding to point 37 around the tire. This includes the rubber lip 36, disc 26, frusto-conical shape of disc 28 and central opening 29 as disclosed by Roth.

This surface (from 37 to the centre of 29 and then to point 37 on the other side) is not flat as it has significant “step” portions at 28 and the central opening 29 (see Roth Figure 2 and page 1, line 92 to page 2, line 7). Figure 2 shows part of this area for the top half of the tire and clearly shows that there is a section where the surface presented to the airflow is not substantially flat in shape (the section of the frusto-conical shape 28 and central opening 29).

Thus, when the claim language is properly interpreted the Roth reference does not disclose or suggest the limitations “on at least one side of the wheel during use of the aircraft when airborne and the landing gear is in a position ready for landing of the aircraft, the surface of the wheel/tire assembly presented to the airflow-across the part bounded by the widest part of the tire is substantially flat” as recited in independent claim 15. Accordingly, claim 15 should be patentable because all of the limitations of claim 15 have not been demonstrated to be present in the prior art and the Office Action does not establish a *prima facie* case of obviousness. Claims 16-27 and 33-35 depend from claim 15 and should be patentable for at least the same reasons as claim 15.

When the claim language is properly interpreted the Roth reference does not disclose or suggest the limitations “wherein on at least one side of the wheel when the landing gear is in a position ready for landing of the aircraft, the surface of the wheel/tire assembly presented to the

airflow across the part bounded by the widest part of the tire is substantially flat" as recited as recited in independent claim 28.

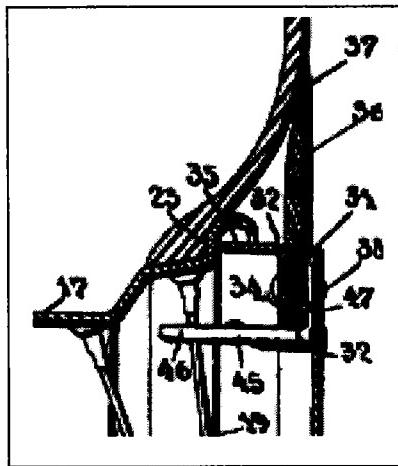
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Accordingly, claim 28 should be patentable because all of the limitations of claim 28 have not been demonstrated to be present in the prior art and the Office Action does not establish a prima facie case of obviousness.

3. Roth does not disclose "a second surface in contact with the rim."

Claim 15 recites "a second surface in contact with the rim."

The Office Action incorrectly states that Roth discloses the rubber lip 36 with a (second) surface in contact with the rim. The rim is defined in line 3 of claim 15, where it is specified that the rim has a tire mounted around it.



Hence, the rim is identified by Roth with reference numeral 17 of Figure 2 (see also page 1, column 2, lines 86 to 88). The rim does not include flange 35, annular portion 32 or inner leg 34 as these structures do not have the tire mounted around them and they are separate structures from the rim. The rubber lip 36 does not have a surface in contact with this rim 17 (or rim flange 23).

Hence, even if the combination of the separate part of Roth with the landing gear of Hartel/Labrecque was made, the resulting landing gear would not disclose or suggest all of the limitations of claim 15.

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The Office Action states that the conclusion of obviousness relates to “what the combined teachings of the references would have suggested. The decision of the United States Supreme Court in KSR requires more. “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”” *KSR*, 550 U.S. at \_\_\_, 82 USPQ2d at 1396.

Applicant has presented detailed arguments about how it is actually not possible to combine the separate part of Roth with the retractable landing gears of Hartel/ Labrecque. This is not simply a case that the embodiments shown in the documents cannot be readily combined but also that it is not readily possible to combine a rubber lip, as in Roth, with any retractable landing gear. Significant structural change would be required to make a rubber lip work on a modern deployable landing gear. This is because a modern landing gear would not have a spoked wheel and it is not obvious how such a rubber lip could be attached to a landing gear without spokes. The Office Action does not present reasoning with some rational underpinning as to why one of ordinary skill in the art would modify the prior art to provide the elements not disclosed or suggested by the cited references. These arguments are in the Amendment filed June 21, 2010 at pages 9 and 10. Accordingly, a *prima facie* case of obviousness has not been established.

4. The claim language “to smooth and close the gap” is, in fact, present in the claims contrary to the assertion made in the Office Action.

The Office Action argues at page 8 that the language “(i.e., the separate part fills the gap) is not recited in the rejected claims.” Claim 15 recites “a third surface which extends between the first surface and the second surface so as to provide a surface *to smooth and close the gap* in the region of the junction between the tire and the wheel rim.” Accordingly, this limitation is present in the pending claims, the statement is in error and the rejection on this basis is improper. Thus claim 15 and the claims that depend from it should be patentable for at least this additional reason.

Thus, this Brief demonstrates the omission of at least three essential elements required for a prima facie rejection under 35 U.S.C. § 103 and at least one clear error. Applicant respectfully requests that the rejection be withdrawn.

It is respectfully requested that the rejections in the Office Action be withdrawn, because the claims are in condition for allowance.

Respectfully submitted,



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